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10/064,269

06/27/2002

Ruthie D. Lyle

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02/22/2006

IBM CORPORATION
3039 CORNWALLIS RD.
DEPT. T81 / B503, PO BOX 12195
REASEARCH TRIANGLE PARK, NC 27709

EXAMINER

MEEK, JACOB M

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/064,269 | Applicant(s) LYLE ET AL. | |
| | Examiner Jacob Meek | Art Unit 2637 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed December 6, 2005 have been fully considered but they are not persuasive.

As noted in 1st Office Action, Soussi's method avoids interference by not transmitting data on channels experiencing interference. In Bluetooth, NULL packets are packets sent that do not require acknowledgement. As such, there appears to be no functional difference between sending a packet which does not initiate a positive response at the receiver, and not sending data at all. Soussi's method does measure and transmit data on "good" channels and avoids transmitting data on "bad" channels. Given the lack of statement of purpose for the transmission of a NULL packet, it appears that there is equivalency between these functions as they are both avoiding interfering channels. The transmission of NULL packets differs, but does not appear to describe any additional functionality over and above Soussi's apparatus in view of the fact the NULL packets do not appear to be identified as adding any additional functionality versus not transmitting on interfered with channels. In essence, Examiner holds the transmission of a NULL packet is a superfluous addition as there is no indicated functionality gained by said transmission of NULL packets.

Further review of other art suggests use of NULL packets is known for characterization (Treister et al, US-2002/0097681, paragraphs 0107, 0108) of channels.

2. Restatement of previous rejections.

Claims 1 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi et al (US-6,553,060).

With regard to claim 1, Souissi discloses a wireless communications method comprising: scanning the channels for interference and identifying channels experiencing interference (see column 2, lines 49 – 52); transmitting normal data when hopping to a channel not identified as experiencing interference (see column 2, lines 54 – 66). Souissi is silent with respect to transmission of null packets on channels experiencing interference. Souissi discloses the use of best available channels (see column 2, lines 49 – 52) which eliminates interfered channels and obviates the need for transmission of null packets over interference channels which appears to be a simpler technique, and therefore would have been obvious to one of ordinary skill in the art at the time of invention.

With regard to claim 2, Souissi discloses a wireless communications method wherein the scanning step is performed upon commencement of data transmission (see column 2, lines 61 – 66 where this is interpreted as equivalent).

With regard to claim 3, Souissi discloses a wireless communications method wherein the scanning step is performed upon each passage of a 1st time period (see column 2, lines 49 – 52 where this is interpreted as equivalent).

With regard to claim 4, Souissi discloses a wireless communications method wherein the scanning step is repeated periodically during data transmission (see figure 3, and column 4, lines 54 – 65 where this is interpreted as equivalent).

With regard to claim 5, Souissi discloses a wireless communications method wherein the scanning step is performed upon when a data throughput falls below a predefined value (see column 3, lines 56 – 58 where this is interpreted as equivalent).

With regard to claim 6, Souissi discloses a wireless communications method wherein the scanning step is performed when requested by user (see column 2, lines 57 – 66 where this is interpreted as equivalent).

With regard to claim 7, Souissi discloses a wireless communications method wherein the scanning step is repeated whenever: a) 2nd time period has passed (see figure 3, and column 4, lines 54 – 65 where this is interpreted as equivalent); b) a data throughput falls below a predefined value

(see column 3, lines 56 – 58 where this is interpreted as equivalent); or c) requested by user (see column 2, lines 57 – 66 where this is interpreted as equivalent).

With regard to claims 8 and 10, Souissi discloses a wireless communications method wherein the communications architecture is standard known as Bluetooth (see column 1, lines 29 – 46).

With regard to claims 9 and 11, Souissi is silent with respect to IEEE 802.15.1. IEEE 802.15.1 is based on Bluetooth standard and therefore would have been obvious to one of ordinary skill in the art at the time of invention (see column 1, lines 29 – 46).

With regard to claim 12, Souissi discloses a wireless communications method in ISM band using Bluetooth (see column 2, lines 52 – 53) comprising: scanning the channels for interference and identifying channels experiencing interference (see column 2, lines 49 – 52); transmitting normal data when hopping to a channel not identified as experiencing interference (see column 2, lines 54 – 66). Souissi is silent with respect to transmission of null packets on channels experiencing interference and power up operation. Souissi discloses the use of best available channels (see column 2, lines 49 – 52) which eliminates interfered channels and obviates the need for transmission of null packets over interference channels which appears to be a simpler technique, and therefore would have been obvious to one of ordinary skill in the art at the time of invention. Souissi's method would require a power up sequence for the establishment of network and therefore would have been obvious to one of ordinary skill in the art at the time of invention.

With regard to claim 13, Souissi discloses a wireless communications method wherein the scanning step is repeated periodically during data transmission (see figure 3, and column 4, lines 54 – 65 where this is interpreted as equivalent).

With regard to claim 14, Souissi discloses a wireless communications method wherein the scanning step is performed upon when a data throughput falls below a predefined value (see column 3, lines 56 – 58 where this is interpreted as equivalent).

With regard to claim 15, Souissi discloses a wireless communications method wherein the scanning step is performed when requested by user (see column 2, lines 57 – 66 where this is interpreted as equivalent).

With regard to claim 16, Souissi discloses a wireless communications method wherein the scanning step is repeated whenever: a) 3rd time period has passed (see figure 3, and column 4, lines 54 – 65 where this is interpreted as equivalent); b) a data throughput falls below a predefined value (see column 3, lines 56 – 58 where this is interpreted as equivalent); or c) requested by user (see column 2, lines 57 – 66 where this is interpreted as equivalent).

With regard to claim 17, Souissi discloses a wireless communications method in ISM band using Bluetooth (see column 2, lines 52 – 53) comprising: scanning the channels for interference and identifying channels experiencing interference (see column 2, lines 49 – 52); transmitting normal data when hopping to a channel not identified as experiencing interference (see column 2, lines 54 – 66). Souissi is silent with respect to transmission of null packets on channels experiencing interference and power up operation. Souissi discloses the use of best available channels (see column 2, lines 49 – 52) which eliminates interfered channels and obviates the need for transmission of null packets over interference channels which appears to be a simpler technique, and therefore would have been obvious to one of ordinary skill in the art at the time of invention. Souissi's method would require a power up sequence for the establishment of network and therefore would have been obvious to one of ordinary skill in the art at the time of invention. Souissi is silent with respect to IEEE 802.15.1. IEEE 802.15.1 is based on Bluetooth standard and therefore would have been obvious to one of ordinary skill in the art at the time of invention (see column 1, lines 29 – 46).

With regard to claim 18, Souissi discloses a wireless communications method wherein the scanning step is performed upon when a data throughput falls below a predefined value (see column 3, lines 56 – 58 where this is interpreted as equivalent).

With regard to claim 19, Souissi discloses a wireless communications method wherein the scanning step is performed when requested by user (see column 2, lines 57 – 66 where this is interpreted as equivalent).

With regard to claim 20, Souissi discloses a wireless communications method wherein the scanning step is repeated whenever: a) 4th time period has passed (see figure 3, and column 4, lines 54 – 65 where this is interpreted as equivalent); b) a data throughput falls below a predefined value

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(see column 3, lines 56 – 58 where this is interpreted as equivalent); or c) requested by user (see column 2, lines 57 – 66 where this is interpreted as equivalent).

Other Cited Prior Art

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Treister et al (US 2002/0097681) discloses a method for managing Bluetooth communications based on channel assessments including use of NULL packets for channel characterization.

Gan et al (US 2002/0136268) discloses a method for selecting communication channels based on channel assessments including use of NULL packets for channel characterization.

Scanlon et al (US 2003/0231607) discloses a media access control protocol for wireless applications that appears to address aspects of applicant's disclosure.

Wallstedt ('793, previously cited) discloses that on-going allocation / de-allocation of frequencies based on interference measurements.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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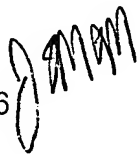
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM
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TEMESGHEN GHEBRETSINAE
PRIMARY EXAMINER
2/15/06
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